

WHAT IS CLAIMED IS:

1. An in-mold coated substrate, comprising:

the substrate; and

5 a cured in-mold coating located on at least a portion of a surface of said substrate, said substrate including at least one runner section to promote flow of said in-mold coating to said coated portion.

10 2. A substrate according to claim 1, wherein at least one of said runner sections extends on said substrate from an in-mold coating injection inlet area to a predetermined end location.

15 3. A substrate according to claim 1, wherein said substrate comprises at least one show surface and a back surface, and wherein said in-mold coating is applied to at least a portion of said at least one show surface.

20 4. A substrate according to claim 2, wherein said at least one runner section is an area of increased thickness on said substrate relative to at least a second area on said substrate.

5. A substrate according to claim 2, wherein said in-mold coating is substantially located on said substrate surface in the area of said runner section.

6. A substrate according to claim 3, wherein said in-mold coating substantially completely covers said at least one substrate show surface.

5 7. A substrate according to claim 1, wherein said substrate further includes an in-mold coating containment flange situated about a perimeter of said substrate which prevents said in-mold coating from leaking into parting line of a mold cavity.

10 8. A substrate according to claim 1, wherein said substrate is a thermoplastic.

9. A substrate according to claim 1, wherein said in-mold coating is a thermosetting acrylic composition.

15 10. A substrate having a flange for in-mold coating containment, comprising:

a molded substrate having a show surface and a second surface substantially opposite said show surface, said substrate having a cured in-mold coating on at least a portion of said show surface, said substrate including a flange extending substantially around the perimeter of said show surface in a plane offset from said show surface.

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11. A substrate according to claim 10, wherein said flange has a thickness less than a thickness between said show surface and said second surface.

5 12. A substrate according to claim 10, wherein said flange has a sufficiently minimal thickness in a plane offset from the show surface, so that said in-mold coating is substantially prevented from leaving the show surface and coating said flange.

10 13. A substrate according to claim 11, wherein said show surface is substantially covered with said in-mold coating, and wherein said flange is substantially free of said in-mold coating.

 14. An in-mold coated substrate comprising:

15 the substrate, said substrate having an in-mold coating injection inlet area, said inlet area located in an area of said substrate where an in-mold coating is injected onto said substrate, said inlet area having at least two different thicknesses to channel flow of said in-mold coating onto said substrate.

20 15. A substrate according to claim 14, wherein said inlet area is a tab which includes a thick central portion and a relatively thin outer perimeter which partially surrounds said thick central portion.

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16. A substrate according to claim 15, wherein said relatively thin outer perimeter is an in-mold coating containment flange which substantially is a flow barrier to said in-mold coating.

5 17. A method for promoting preferential flow of an in-mold coating on a substrate comprising the steps of:

forming a substrate, said substrate having at least one area of increased dimensional thickness relative to at least one adjacent area;

10 coating said substrate on a show surface thereof with an in-mold coating so that said substrate area of increased dimensional thickness is preferentially coated relative to said substrate area without increased dimensional thickness.

15 18. A method according to claim 17, wherein said substrate includes an in-mold coating containment flange situated about a perimeter of said substrate which prevents said in-mold coating from leaking into a parting line of a mold cavity.

20 19. A method according to claim 17, wherein said at least one area of increased dimensional thickness is a runner section which promotes flow of said in-mold coating to said coated portion.

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20. A method according to claim 19, wherein at least one of said runner sections extends on said substrate from an in-mold coating injection inlet area to a predetermined end location.

5 21. A method according to claim 17, wherein said substrate includes an in-mold coating injection inlet area, said inlet area located in an area of said substrate where an in-mold coating is injected onto said substrate, said inlet area having at least two different thicknesses to channel flow of said in-mold coating onto
10 said substrate.

22. A method according to claim 21, wherein said inlet area is a tab which includes a thick central portion and a relatively thin outer perimeter which partially surrounds said thick central portion.

15 23. A method for molding and selectively coating in the mold a substrate, comprising the steps of:

molding the substrate between at least two separable mold members which form a closed mold cavity therebetween at a
20 temperature and a clamp pressure sufficient to form the substrate, said mold cavity having areas of varying thickness which allow said molded substrate to have areas of varying thickness;

injecting a suitable amount of coating into the mold cavity on a surface of the substrate whereby said coating preferentially

covers a predetermined substrate area which due to varying thickness has a compressibility sufficient to accept said coating, and curing the coating.

5 24. A method according to claim 23, wherein said substrate includes an in-mold coating containment flange situated about a perimeter of said substrate which prevents said in-mold coating from leaking into a parting line of a mold cavity.

10 25. A method according to claim 23, wherein said at least one area of increased dimensional thickness is a runner section which promotes flow of said in-mold coating to said coated portion.

15 26. A method according to claim 25, wherein at least one of said runner sections extends on said substrate from an in-mold coating injection inlet area to a predetermined end location.

20 27. A method according to claim 23, wherein said substrate includes an in-mold coating injection inlet area, said inlet area located in an area of said substrate where an in-mold coating is injected onto said substrate, said inlet area having at least two different thicknesses to channel flow of said in-mold coating onto said substrate.

28. A method according to claim 27, wherein said inlet area is a tab which includes a thick central portion and a relatively thin outer perimeter which partially surrounds said thick central portion.

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